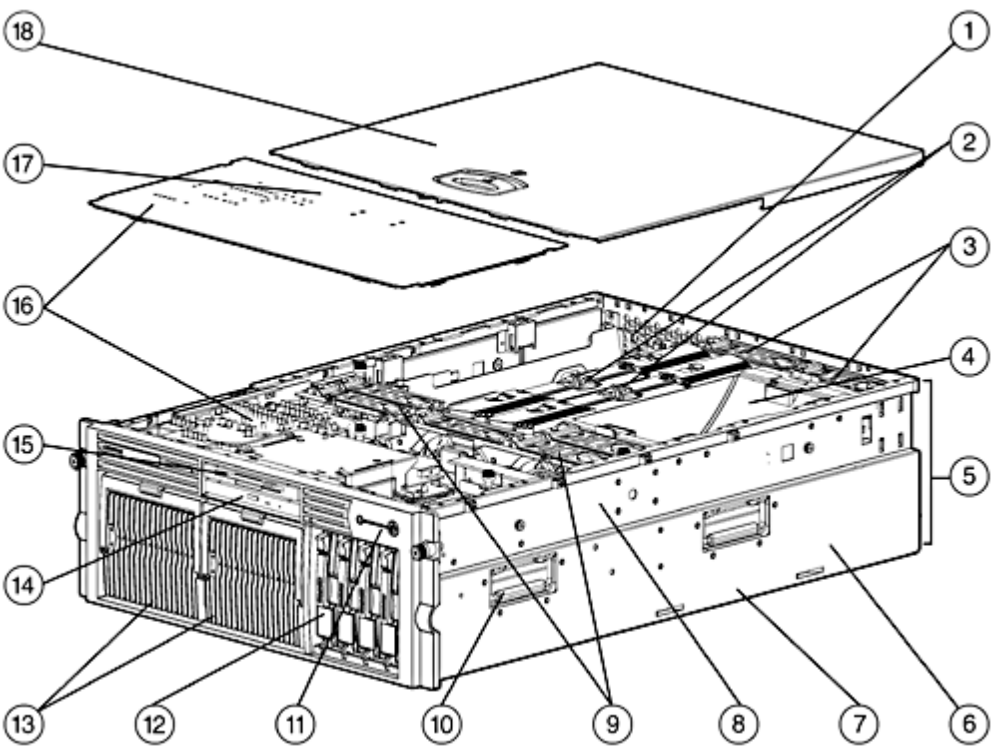
Overview



1. Six 64-bit/100-MHz PCI-X I/O Slots (Four Hot Plug, two Non-Hot Plug)
2. Dual Memory Expansion Boards (8 DIMM slots each - one board standard on all models, 2nd board is optional)
3. Hot Plug Redundant Fans
4. Processor Air Baffle
5. 4U (7" Height) Rack Form Factor
6. Up to 4 Intel Processors MP
7. Integrated Smart Array 5i Plus Controller (Battery Backed Write Cache standard on all 2P models, optional on 1P model)
8. Tool-less "Snap In" rail solution
9. Additional Hot Plug Redundant Fans
10. Server Lifting Handle
11. Front Panel LED Display (internal and external health, Unit ID light) and Power Button
12. Wide Ultra3/U320 Duplex Drive Cage (can be Simplex configured)
13. Dual 800-Watt Hot Plug Redundant Power Supplies (low line or high line), standard on all 2P models (one ships standard on 1P model, requires optional RPS for redundancy)
14. Slimline Drives: 24X (slimline) CD-ROM IDE Drive
15. Slimline Drives: Ejectable 1.44 MB (slimline) Diskette Drive
16. QuickFind Diagnostic Display (viewable through Front Access Panel)
17. Removable Front Access Panel
18. Removable Rear Access Panel

What's New

- Intel® Xeon Processors MP at 2.2 GHz/2MB, 2.7 GHz/2MB or 3.0 GHz/4MB
- Integrated Dual Port NC7170 PCI-X Gigabit Server Adapter in a slot

Overview

At A Glance

- Delivering maximum performance and unprecedented availability in a flexible, rack optimized form factor
- Intel Xeon Processors MP
- ServerWorks Grand Champion-HE chipset
- 4x1 interleaved memory, 200MHz DDR SDRAM Memory (PC1600 Registered SDRAM with Advanced ECC functionality)
- 2048 MB (2P Models) or 1024 MB (1P Model) standard memory, expandable to 32 GB
- HP Advanced Memory Protection (Online Spare, Single Board Mirrored Memory, Hot Plug Mirrored Memory, Hot Add Memory)
- Six, full length 64-bit/100 MHz PCI-X slots, 4 Hot Pluggable
- Integrated Lights-Out Standard Management (iLO) on system board
- Integrated NC7770 PCI-X Gigabit Server Adapter or Integrated HP NC7170 Dual-Port PCI-X 1000T Gigabit Server Adapter in a slot Depending on model)
- Integrated Smart Array 5i Plus Controller (Dual Channel, Ultra3) with 64-MB total memory on 5i Plus Memory Module
- Battery-Backed Write Cache Enabler module on all 2P models (optional on 1P model)
- Internal Hot Plug Drive Storage of up to 1.20 TB (4 x 300 GB 1" Ultra320 hard drives) or one DAT hot plug tape drive and two hot plug hard drives
- Redundant Cooling Zones for major subsystems (Memory, I/O, CPUs) assure 7x24 cooling
- Toolless and virtually cable-less internal design
- Innovative diagnostic lighting (QuickFind Diagnostic Display) for rapid response to service events
- Rapid Deployment racking solution (rack rails and cable management)
- Protected by HP Services and a worldwide network of resellers and service providers. Three-year Next Business Day, on-site limited global warranty. Certain restrictions and exclusions apply. Pre-Failure Notification on processors, memory, and SCSI hard drives.

Standard Features

Processor One or more of the following depending on Model	Intel Xeon Processor MP at 3.0 GHz\4MB Intel Xeon Processor MP at 2.7 GHz\2MB Intel Xeon Processor MP at 2.2 GHz\2MB Intel Xeon Processor MP at 2.8 GHz\2MB Intel Xeon Processor MP at 2.5 GHz\1MB Intel Xeon Processor MP at 2.0 GHz\1MB
Cache Memory One of the following depending on Model	4MB Integrated Level 3 Cache NOTE: 3.0 GHz Models only. 2MB Integrated Level 3 Cache NOTE: 2.8 GHz, 2.2 GHz, 2.7 GHz Models only. 1MB Integrated Level 3 Cache NOTE: 2.5 GHz, 2.0 GHz Models only.
Upgradability	Upgradable to quad processing
Chipset	ServerWorks Grand Champion-HE chipset NOTE: For more information regarding ServerWorks, please see the following URL: http://www.serverworks.com/products/overview.html.
Memory One of the following depending on Model	Type: 200-MHz Double Data Rate (DDR) SDRAM (PC1600 Registered SDRAM Memory with Advanced ECC functionality) Standard (2P Models): 2048 MB Standard (1P Models): 1024 MB Maximum: 32 GB NOTE: Advanced ECC Memory Technology protects the data even in the event of an entire SDRAM component failure. Embedded in the chipset design, this feature allows the use of Industry-Standard Registered DIMMs. NOTE: 32 GB achieved with use of 2nd, optional memory board and 2GB Registered DIMM sticks.
Network Controller One of the following depending on Model	Integrated NC7170 dual port PCI-X Gigabit Server Adapter in a slot (3.0 GHz, 2.7 GHz, 2.2 GHz models only) Integrated NC7770 PCI-X Gigabit Server Adapter in a slot

Standard Features

Expansion Slots	Bus speed	Bus number	Hot Plug	PCI Voltage	Notes
1	64-bit / 100 MHz PCI-X	10	No	3.3 Volt	Support RILOE slot
2	64-bit / 100 MHz PCI-X	10	No	3.3 Volt	NC7770/ NC7170 (3.0 GHz, 2.7 GHz, 2.2 GHz models) installed standard
3	64-bit / 100 MHz PCI-X	6	Yes	3.3 Volt	None
4	64-bit / 100 MHz PCI-X	6	Yes	3.3 Volt	None
5	64-bit / 100 MHz PCI-X	2	Yes	3.3 Volt	None
6	64-bit / 100 MHz PCI-X	2	Yes	3.3 Volt	None

Manageability

Integrated Lights-Out (iLO) Standard Management (ASIC on the System Board)

Storage Controllers

Smart Array 5i Plus Controller (integrated on system board), Dual Channel, Ultra3 (supports RAID 0, 1, 1+0, and 5 across internal hard disk drives) with 64 MB of memory.

- 64-MB total memory for code, transfer buffers, and read/write cache on the 5i Plus Memory Module
- Connector for Battery Backed Write Cache (BBWC) Enabler

NOTE: The Smart Array 5i Plus Controller is integrated on the system board and is designed to support the duplex/simplex drive cage. An external SCSI port is not available on the HP ProLiant DL580 G2. External SCSI solutions require the addition of a PCI or PCI-X option card. Slot based Smart Array controllers can support both internal hard drives as well as external SCSI solutions.

Storage Data Protection

The Battery-Backed Write Cache (BBWC) Enabler protects up to 64-MB write cache memory from hard boot, power, controller, or system board failures.

- Standard on 2P Models, optional on 1P Models
- Battery charge/life: Up to 72 hours/3 years
- Transportable data protection
- Increases overall controller performance

NOTE: Safely transport your write cache data to another HP ProLiant DL580 G2 in the data center by removing the BBWC Enabler and 5i Plus Memory Module simultaneously (connected by short cable).

Standard Features

Storage	**Diskette Drive**	1.44 MB (slimline) – ejectable for security and serviceability
	Optical Drive	24x IDE CD-ROM Drive (slimline) – ejectable for security and serviceability
	Hard Drives	None
	Maximum Internal Storage	1.20 TB (4 x 300 GB Ultra320 1" SCSI drives) (internal hot plug Ultra3 drive cage)
	Hard Disk Drive Backplane	Internal Wide Ultra3/U320 backplane supports up to four 1" hard disk drives and is easily configurable to support simplex (4x1) or duplex mode (2x2) Standard shipping configuration is the duplex mode. NOTE: U320 speeds achieved by installing a slot based U320 Smart Array controller and can control both the internal hard drives as well as external storage solutions. NOTE: Optional SCSI cable assembly 288874-B21 is required for connecting Smart Array Controller in a PCI slot to internal hard drive backplane. Duplex configuration requires two such kits.

Interfaces	Serial	1
	Pointing Device (Mouse)	1
	Graphics	1
	Keyboard	1
	Rear USB Ports	2
	iLO Remote Management	1
	Network RJ-45	1 / 2

Graphics	Integrated 1280 x 1024, 16M color on PCI local bus, 8-MB of SDRAM video memory

Form Factor	Rack (4U = 7 inches), ships with sliding rails and cable management system Space saving form factor (4U) provides space efficiencies while providing maximum deployment flexibility

ProLiant Essentials Foundation Pack Software	HP Systems Insight Manager	HP's new HP Systems Insight Manager (HP SIM) helps maximize system uptime and performance and reduce system maintenance costs by providing proactive notification of problems before those problems result in unplanned downtime or reduced productivity. HP SIM are both easy to set up work with the Insight Management Agents, integrated Lights-Out and Remote Insight Lights-Out Edition, and Version Control Agents to deliver robust fault, configuration, and asset management as well as remote administration. With HP SIM customers will also be able to take advantage of role-based security; the ability to manage ProLiant, Integrity, and HP 9000 systems; and plug-ins for storage, client, printer, and power management as well as server rapid deployment, performance management, and workload management. For more details on HP SIM visit http://www.hp.com/go/hpsim.
	SmartStart	SmartStart is a tool that simplifies server setup, providing a rapid way to deploy reliable and consistent server configurations. For more information, please visit the SmartStart Web site at http://www.hp.com/servers/smartstart. SmartStart version supported (minimum): SmartStart 6.40.

Standard Features

Management Agents	The Management Agents form the foundation for HP's Intelligent Manageability strategy. They provide direct, browser-based access to in-depth instrumentation built into HP servers, workstations, desktops, and portables, and send alerts to Systems Insight Manager and other enterprise management applications in case of subsystem or environmental failures. For additional information about the Management Agents and other management products from HP, please visit the management Web site at http://www.hp.com/servers/manage.
Subscriber's Choice	Subscriber's Choice Driver and Support Alerts/Notifications is a web-based email subscription service that provides automatic delivery of software and driver change notifications for ProLiant products. Sign up at http://www.hp.com/go/subscriberschoice and customize your profile to receive various new alerts as they become available, on a weekly or monthly basis.
ROMPaq, support software, and configuration utilities	The latest software, drivers, and firmware fully optimized and tested for your ProLiant server and options available in SmartStart or downloadable from Software and Drivers download pages, linked from the SmartStart website at http://www.hp.com/servers/smartstart.
Survey Utility and diagnostics utilities	The most advanced configuration analysis, reporting and troubleshooting utilities used by HP and at your fingertips, available in SmartStart.
Optional ProLiant Essentials Value Packs	Optional software offerings that selectively extend the functionality of an Adaptive Infrastructure to address specific business problems and needs: • Rapid Deployment Pack - an automated solution for multi-server deployment and provisioning, enabling companies to quickly and easily adapt to changing business demands. • Workload Management Pack - provides easier management of complex environments, improving overall server utilization and enabling Windows® 2000 customers for the first time to confidently deploy multiple applications on a single multiprocessor ProLiant Server. • Integrated Lights-Out Advanced Pack - upgrades the Integrated Lights-Out processor to full virtual presence and control with graphical console and virtual media. • Performance Management Pack - a performance management solution that identifies and explains hardware performance bottlenecks on ProLiant servers and attached options enabling users to better utilize their valuable resources. • Intelligent Networking Pack - detects and analyzes network bottlenecks or broken network linkages and steers traffic to the optimum route based on network conditions, plus it provides an extra layer of protection. The virus throttle feature of the solution slows the propagation of fast spreading virus. • Vulnerability and Patch Management Pack - identifies and remediates software security vulnerabilities due to missing patches as well operating system configurations that can be exploited by viruses, worms, and other blended threats • Virtual Machine Management Pack - provides central management and control of virtual machines from Microsoft and VMware. Integrated approach provides the ability to manage both physical and virtual resources from a single management console.

Standard Features

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.
NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials.

Industry Standard Compliance

ACPI 1.0a. Compliant
PCI 2.2 Compliant
PXE Support
WOL Support
Physical Address Extension (PAE) Support
Microsoft® Logo certifications

Intelligent Manageability

Integrated Lights-Out (iLO) Standard Management

- Virtual Text Remote Console
- Virtual Power Button Control
- Dedicated LAN Connectivity
- Automatic IP Configuration via DHCP/DNS/WINS
- Industry Standard 128-bit Secure Sockets Layer (SSL) Security
- IML and iLO Event Logging
- Support for 12 user accounts with customizable access privileges

Integrated Lights-Out (iLO) Advanced Pack (supports Advanced features such as Graphical Remote Console and Virtual Floppy - available as a separate option)
Automatic Server Recovery-2 (ASR-2)
HP Systems Insight Manager
Redundant ROM
Remote Flash ROM
ROM-Based Setup Utility (RBSU)
Integrated Management Log (IML)
Hot Spare Boot
(NOTE: Upon the event of a failed processor or VRM in a multi-processing environment, the system will automatically reboot and use the remaining good processor(s).)
Dynamic sector repairing and drive parameter tracking (with Smart Array controllers)
Redundant/adaptive load balancing NIC Support

Availability

- Standard Advanced ECC functionality detects and corrects single bit and specific multi-bit memory errors (4bit and 8bit) while using industry standard registered DIMMS. Functionality is embedded in the chipset design.
- HP Advanced Memory Protection Technology – delivers unsurpassed memory protection and server availability:
  - Online Spare Memory
    Offers a higher level of memory protection than Advanced ECC alone. If the number of single-bit correctable errors on a bank exceeds the pre-defined error threshold, that bank will fail over to the online spare bank without intervention or server interruption. The failed memory can then be replaced at the user's convenience during a scheduled maintenance window.

- Single-Board Mirrored Memory
  Single-board mirrored memory provides a higher level of availability than Advanced ECC and Online Spare Memory because it protects against multi-bit errors. Single-board Mirrored Memory uses mirrored banks on a single memory board that is configured with one redundant bank of memory. The system writes to both banks, but reads from one. If a DIMM(s) has a multi-bit error, the system simply reads from the mirrored bank instead. This process occurs without intervention or server interruption, and the failed DIMM can be replaced during a regularly scheduled shutdown.
- Hot Plug Mirrored Memory
  Hot Plug Mirrored Memory is a fault-tolerant memory feature that provides a higher level of availability than Advanced ECC, Online Spare Memory, or Single-Board Mirrored Memory because it protects against multi-bit errors and does not require any server downtime to replace failed DIMMs. Hot Plug Mirrored Memory requires that two memory boards be installed, one an exact mirror of the other, which run in parallel and provide protection against multi-bit memory errors. When configured for Hot Plug Mirrored Memory, the system writes to both memory boards, but reads from one. If a read error occurs, the system fails over to the redundant memory board. At that point the memory board containing the failed DIMMs can be hot replaced. Once the failed DIMMs are replaced and the memory board re-installed into the server, the system goes back to full mirrored status. All this occurs without bringing the server down.

  NOTE: Hot Plug Mirrored Memory and Dual-Board Online Spare Memory require the use of two memory cards. All HP ProLiant DL580 G2 servers ship standard with a single memory board. The second memory board is optional (P/N 203320-B21).
  NOTE: All HP Advanced Memory Protection modes are user configurable through the ROM-Based Setup Utility (RBSU) and viewable through HP Systems Insight Manager and the Integrated Management Log (IML.).

- PCI-X Hot Plug Technology (Four 64bit/100-MHz PCI-X hot plug slots available)
- Smart Array 5i Plus Controller with standard Battery Backed Write Cache (BBWC) Enabler provides transportable data protection and increases overall controller performance. Up to 64MB Battery Backed Write Cache protection available on 2P models (BBWC Enabler is optional on 1P model.)
- Redundant Cooling Zones across major server subsystems (Memory, I/O, CPU) provide 7x24 cooling. Each zone is independent of each other and is able to support n+ 1 redundancy, as indicated below:
- PCI-X expansion zone is 1 + 1 redundant (fans 1 and 2)
- Memory zone is 1 + 1 redundant (fans 3 and 4)
- CPU zone is 2 + 1 redundant (fans 5, 6, and 7)

This zone configuration enables the server to withstand up to three fan failures, provided that they are not within the same zone. Each fan is hot plug redundant and individually removable.

- Up to four Hot Plug Ultra3 Drive Bays
- Duplex or Simplex SCSI Backplane (Duplex configuration is standard)
- Dual Hot Plug Redundant Power Supplies (standard on 2P Models, one ships standard on 1P Models)

Standard Features

Serviceability

- Innovative Diagnostic Lighting
- QuickFind Diagnostic Display – precisely depicts all major subsystems of the server (PCI-X I/O, Memory, CPU, Redundant Cooling, Interlock, Thermtrip) and gives instant visual indication of fault status. Located on top front of server.
- LED display on front panel indicates power, internal health, external health, Unit ID light.
- LED display on Memory board indicates Memory status, health, and protection mode.
- Tool-less, virtually cable-less interior design
  - Tool-less access to interior of server
  - Two ejectable, slimline media drives (diskette and CD-ROM standard with support for optional DVD-ROM drives) are removable without the use of tools
  - Front access power supplies
  - Spring-loaded memory board release latches prevent unseating incidents
  - PCI Card Guides locks full length PCI cards in place during transit
  - SCSI Duplex/Simplex Drive Cage connects directly to system board – no cables.
    NOTE: Configure your SCSI Duplex/Simplex Drive Cage by means of simple switch (duplex to simplex)
    located on the cage itself. System ships standard in Duplex mode.
  - Seven individually removable fans connect without cables to the system board
  - Processor/VRM Retention Cage securely locks both processor and VRM into their respective sockets
  - Tool-less removal of system board
- Quick Deploy Rails
  - Tool-less design "snap in" rail

Security

Power-on password
Keyboard password
Diskette drive control
Diskette boot control
Network Server Mode
Serial interface control
Administrator's password
Disk configuration lock
Removable Diskette drive
Removable CD-ROM drive

Power Supply

800-Watt (low line or high line) Hot Plug Power Supply
NOTE: One 800-Watt Hot Plug Power Supply ships standard with 1P Models (optional Redundant Hot Plug Power Supply Option Kit).
NOTE: Two 800-Watt Hot Plug Power Supplies ship standard with 2P Models.

UPS and PDU Power Cord Matrix

Please see the UPS and PDU cable matrix that lists cable descriptions, requirements, and specifications for UPS and PDU units:
ftp://ftp.compaq.com/pub/products/servers/ProLiantstorage/power-protection/powercordmatrix.pdf.

Standard Features

System Fans

Standard	7 Hot plug, redundant fans (individually removable)
Maximum	7 Hot plug, redundant fans (individually removable)

- Redundant Cooling Zones across major server subsystems (Memory, I/O, CPU) provide 7x24 cooling. Each zone is independent of each other and is able to support n+ 1 redundancy, as indicated below:
  - PCI-X expansion zone is 1 + 1 redundant (fans 1 and 2)
  - Memory zone is 1 + 1 redundant (fans 3 and 4)
  - CPU zone is 2 + 1 redundant (fans 5, 6, and 7)
- This zone configuration enables the server to withstand up to three fan failures, provided that they are not within the same zone. Each fan is hot plug redundant and individually removable.

Required Cabling

For required cabling information, refer to the HP Web site at http://h18000.www1.hp.com/products/servers/proliantDL580/.

OS Support

Windows Server 2003, Standard Edition
Windows Server 2003, Enterprise Edition
Microsoft Windows 2000 Server
Microsoft Windows 2000 Advanced Server
Microsoft NT Server 4.0 and 4.0ES, 4.0TS
Red Hat Linux RedHat Enterprise Server
SuSE Linux Enterprise Server
United Linux Novell Netware
SCO OpenUNIX
Sun Solaris Intel Platform Edition
VMware Virtualization Software

NOTE: For a more complete and up-to-date listing of supported OSs and versions, please visit our OS Support Matrix at: http://www.hp.com/go/supportos.

NOTE: For an up-to-date listing of the latest drivers available for the HP ProLiant DL580 G2, please see: http://www.HP.com/support/files/server/us/index.html.

NOTE: For a more complete and up-to-date information on Linux support, please visit HP Linux Web site at http://h18000.www1.hp.com/products/servers/linux/hpLinuxcert.html.

NOTE: For more complete and up-to-date information on how to buy server operating systems from HP please visit the OS product site at: http://h18004.www1.hp.com/products/servers/software/OEM.html
NOTE: For more information on HP's Certified and Supported ProLiant Servers, please visit the VMware Server Support Matrix at:
http://h18004.www1.hp.com/products/servers/software/vmware/hpvmwarecert.html.

Standard Features

Rack Airflow Requirements

Rack 10000 series Cabinets

The increasing power of new high-performance processor technology requires increased cooling efficiency for rack-mounted servers. The 10000 Series Racks provide enhanced airflow for maximum cooling, allowing these racks to be fully loaded with servers using the latest processors.

CAUTION: If a third-party rack is used, observe the following additional requirements to ensure adequate airflow and to prevent damage to the equipment:

- Front and rear doors: If your 42U server rack includes closing front and rear doors, you must allow 5,350 sq cm (830 square inches) of hole evenly distributed from top to bottom to permit adequate airflow (equivalent to the required 64 percent open area for ventilation).
- Side: The clearance between the installed rack component and the side panels of the rack must be a minimum of 7 cm (2.75 inches).

CAUTION: Always use blanking panels to fill all remaining empty front panel U-spaces in the rack. This arrangement ensures proper airflow. Using a rack without blanking panels results in improper cooling that can lead to thermal damage.

NOTE: For additional information, refer to the Setup and Installation Guide or the Documentation CD provided with the server, or to the server documentation located in the Support section at the following URL: http://www5.HP.com/products/servers/proliantdl580/index.html.

Rack Mounting Requirements

HP ProLiant DL580 G2 rack models provide tool-free support for square hole racks (including Compaq/HP 7000, 9000, 10000 and H9 series) with an adjustment range from 28" – 29" in depth.

Factory Express Portfolio for Servers and Storage

HP Factory Express offers configuration, customization, integration and deployment services for HP servers and storage products. Customers can choose how their factory solutions are built, tested, integrated, shipped and deployed.

Factory Express offers service packages for simple configuration, racking, installation, complex configuration and design services as well as individual factory services, such as image loading, asset tagging, and custom packaging. HP products supported through Factory Express include a wide array of servers and storage: HP Integrity, HP ProLiant, HP ProLiant Server Blades, HP BladeSystem, HP 9000 servers as well as the MSA1000, VA7xxx, EVA, XP, rackable tape libraries and configurable network switches.

For more information on Factory Express services for your specific server model please contact your sales representative or go to http://www.hp.com/go/factory-express.

Custom Builder

Please see the Enterprise Configurator for configuration assistance at: http://www.hp.com/products/configurator.

Standard Features

Service and Support

This product is covered by a global limited warranty and supported by HP Services and a worldwide network of resellers and service providers. Hardware diagnostic support and repair is available for three years from date of purchase. Support for software and initial setup is available for 90 days from date of purchase. Additional support may be covered under the warranty or available for an additional fee. Enhancements to warranty services are available through HP Care Pack services or customized service agreements.

NOTE: Limited warranty includes 3 year parts, 3 year labor, 3-year on-site support.

Care Pack services provide a range of life cycle support options that let you choose the service levels that meet your business requirements, from basic to mission-critical.

A full range of HP Care Pack hardware and software services are available including:

- Installation and start up
- Education courses
- Extended onsite hardware coverage hours from same business day 13 hours, 5 day to 24 hours, 7 days call window with options including 4-hour response or 6-hour Call To Repair
- Comprehensive range of software technical support for Microsoft, Linux, ProLiant Essentials and VMWare-based IT solutions helping to deliver high level of application availability. Response times range from 30 mins for critical problems to 2 hours.
- System Management, Performance Services and Mission Critical Support Solution

HP Care Pack Services include HP branded hardware options qualified for the server, purchased at the same time or afterwards, internal to the enclosure, as well as 22" and smaller external monitors and tower UPS options up to 3KVA. 22" and smaller external monitors will be covered at the same service level and coverage period as the server. For servers or storage systems installed within a rack, service also covers all HP qualified rack options installed within the same rack.

NOTE: For more information on HP Care Pack services, contact any of our worldwide sales offices or resellers or visit our worldwide Web site on the internet at: http://www.hp.com/hps/carepack

NOTE: For more complete information on HP Services offerings, customers and resellers, please visit us at: http://www.hp.com/hps

NOTE: Additional information regarding worldwide limited warranty and technical support is available at: http://h18004.www1.hp.com/products/servers/platforms/warranty/index.html

Solutions

Designed for enterprise customers with growing data centers and application and Internet service providers that require a rack optimized 4 processor server that delivers maximum performance and high availability for highly complex, business critical applications. Specifically, the HP ProLiant DL580 G2 would be excellent for running the following types of applications:

Typical Usage:

- Databases
- Large Scale Mail Servers
- ERP/CRM/SCM

For more solutions visit: http://www.hp.com/solutions/proliantdl580.

Models

DL580R02 X3.0 GHz-4MB, 2048MB (2P) 347905-001	**Processor(s)**	(2) Intel Xeon Processors MP at 3.0 GHz standard (up to 4 supported)
	Cache Memory	4MB Integrated Level 3 Cache
	Memory	2048 MB PC1600 registered ECC SDRAM (Standard) to 32 GB (Maximum) (4x1 interleaved memory and HP Advanced Memory Protection Technology)
	Network Controller	Integrated dual port NC7170 PCI-X Gigabit Server Adapter in a slot
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 800W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slimline CD-ROM Drive
	Diskette Drive	1.44 MB Diskette Drive (slimline)
	Form Factor	Rack 4U
DL580R02 X2.7 GHz-2MB, 2048MB (2P) 347904-001	**Processor(s)**	(2) Intel Xeon Processors MP at 2.7 GHz standard (up to 4 supported)
	Cache Memory	2MB Integrated Level 3 Cache
	Memory	2048 MB PC1600 registered ECC SDRAM (Standard) to 32 GB (Maximum) (4x1 interleaved memory and HP Advanced Memory Protection Technology)
	Network Controller	Integrated dual port NC7170 PCI-X Gigabit Server Adapter in a slot
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) with Battery-Backed Write Cache Enabler (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	Two 800W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slimline CD-ROM Drive
	Diskette Drive	1.44 MB Diskette Drive (slimline)
	Form Factor	Rack 4U

Models

DL580R02 X2.2 GHz-2MB, 1024MB (1P) 347903-001	Processor(s)	(1) Intel Xeon Processors MP at 2.2 GHz standard (up to 4 supported)
	Cache Memory	2MB Integrated Level 3 Cache
	Memory	1024 MB PC1600 registered ECC SDRAM (Standard) to 32 GB (Maximum) (4x1 interleaved memory and HP Advanced Memory Protection Technology)
	Network Controller	Integrated dual port NC7170 PCI-X Gigabit Server Adapter in a slot
	Storage Controller	Smart Array 5i Plus Controller (Dual Channel, Ultra3) (integrated on system board)
	Manageability	Integrated Lights-Out (iLO) Standard management (integrated on system board)
	Hard Drives	None ship standard
	Internal Storage	1.20 TB maximum (with optional hard drives)
	Power Supply	One 800W Hot Plug Redundant Power Supplies (low line or high line)
	Optical Drive	24x IDE slimline CD-ROM Drive
	Diskette Drive	1.44 MB Diskette Drive (slimline)
	Form Factor	Rack 4U

HP ProLiant DL580 Unique Options	8 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB)	202173-B21
	4 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB)	202172-B21
	2 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB)	202171-B21
	1 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB)	202170-B21
	Hot Plug Memory Expansion Board NOTE: The Hot Plug Memory Expansion Board provides 8 additional DIMM slots for powering memory-intensive applications.	203320-B21
	800W Hot Plug Redundant Power Supply US	278535-001
	800W Hot Plug Redundant Power Supply -inc IEC	278535-B21
	DL580 G2 24" - 19" Rack Adapter Kit	332815-B21
	DL580 G2 Folding Cable Management Arm	289294-B21
	DL580 G2 Cable Assembly, SCSI, Ultra3, LVDS NOTE: All HP ProLiant DL580 G2 models ship standard with the integrated Smart Array 5i Plus Controller, which has been designed to deliver maximum performance and availability across the internal SCSI Duplex backplane. • The Ultra3 SCSI cable is required only if the customer chooses to bypass the Smart Array 5i Plus Controller and connect slot-based SCSI adapters or RAID controllers to the internal SCSI Duplex backplane. • Two cables are required to maintain the standard, duplexed configuration of the backplane. • One cable is required if the simplex configuration is chosen The backplane is easily configured to simplex mode by means of a simple switch duplex to simplex) located on the top of the backplane itself.	288874-B21
	Cord, AC Line, 20A, 250V, US 12'	235604-001
	Cord, AC Line, 15A, 125V	235603-001
	Cable, 10A, IEC320-C20 to IEC320-C19 NOTE: Power cord (295633-B22) connects ProLiant servers to PDUs or UPSs with IEC320-C19 output connections.	295633-B22
	Cable, 10A, IEC320-C14 to IEC320-C19 8FT NOTE: Power cord (291034-B21) connects HP ProLiant DL580 G2 servers to PDUs or UPSs with IEC320-C13 output connections. This power cord has been specifically designed to work with the HP ProLiant DL580 G2 server. Please NOTE the following important precautions when deploying this power cord: • Use the cord only in conjunction with the HP ProLiant DL580 G2 server. • Use the cord to connect the HP ProLiant DL580 G2 server only to PDUs or UPSs with IEC320-C13 output connections. • Do not use the cord with any other HP ProLiant or third party server. • Do not use the cord with any other office equipment or computers. • Do not use the cord as an extension cord. • Do not plug the cord into a wall outlet. • Failure to adhere to these precautions may invalidate the server warranty.	291034-B21
	Cable, 10A, IEC320-C14 to IEC320-C19 10FT NOTE: Power cord (310927-B21) connects HP ProLiant DL580 G2 servers to PDUs or UPSs with IEC320-C13 output connections. This power cord has been specifically designed to work with the HP ProLiant DL580 G2 server. Please NOTE the following important precautions when deploying this power cord:	310927-B21

- Use the cord only in conjunction with the HP ProLiant DL580 G2 server.
- Use the cord to connect the HP ProLiant DL580 G2 server only to PDUs or UPSs with IEC320-C13 output connections.
- Do not use the cord with any other HP ProLiant or third party server.
- Do not use the cord with any other office equipment or computers.
- Do not use the cord as an extension cord.
- Do not plug the cord into a wall outlet.
- Failure to adhere to these precautions may invalidate the server warranty

Cable, 10A, IEC320-C14 to IEC320-C19 6FT 313227-B21

NOTE: Power cord (313227-B21) connects HP ProLiant DL580 G2 servers to PDUs or UPSs with IEC320-C13 output connections. This power cord has been specifically designed to work with the HP ProLiant DL580 G2 server. Please NOTE the following important precautions when deploying this power cord

- Use the cord only in conjunction with the HP ProLiant DL580 G2 server.
- Use the cord to connect the HP ProLiant DL580 G2 server only to PDUs or UPSs with IEC320-C13 output connections.
- Do not use the cord with any other HP ProLiant or third party server.
- Do not use the cord with any other office equipment or computers.
- Do not use the cord as an extension cord.
- Do not plug the cord into a wall outlet.
- Failure to adhere to these precautions may invalidate the server warranty

Cable, 10A, IEC320-C14 to IEC320-C19 12FT 313228-B21

NOTE: Power cord (313228-B21) connects HP ProLiant DL580 G2 servers to PDUs or UPSs with IEC320-C13 output connections. This power cord has been specifically designed to work with the HP ProLiant DL580 G2 server. Please NOTE the following important precautions when deploying this power cord:

- Use the cord only in conjunction with the HP ProLiant DL580 G2 server.
- Use the cord to connect the HP ProLiant DL580 G2 server only to PDUs or UPSs with IEC320-C13 output connections.
- Do not use the cord with any other HP ProLiant or third party server.
- Do not use the cord with any other office equipment or computers.
- Do not use the cord as an extension cord.
- Do not plug the cord into a wall outlet.
- Failure to adhere to these precautions may invalidate the server warranty

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ProLiant Essentials Value Pack Software

ProLiant Essentials Integrated Lights-Out Advanced Pack

ProLiant Essentials Integrated Lights-Out Advanced Pack, 1 server 263825-B21

Featuring: sophisticated virtual administration features for ultimate control of servers in the data centers and remote sites.

NOTE: For additional ProLiant Integrated Light-Out Advanced Pack License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11052_na/11052_na.HTML

ProLiant Essentials Intelligent Networking Pack

ProLiant Essentials Intelligent Networking Pack, Single Server License 372906-B21

NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Intelligent Networking Pack - Windows License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12062_na/12062_na.HTML

ProLiant Essentials Intelligent Networking Pack - Linux Edition, Single Server License 397004-B21

NOTE: For additional ProLiant Intelligent Networking Pack - Linux License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12327_na/12327_na.HTML

ProLiant Essentials Performance Management Pack

ProLiant Essentials Performance Management Pack, Single-Server License 306696-B21
NOTE: For use with a single server. Contains one license with a unique license activation key, HP Management CD and documentation.
NOTE: The most recent version of the software can always be downloaded at http://www.hp.com/products/pmp.

NOTE: For additional ProLiant Performance Management Pack License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11925_na/11925_na.HTML

ProLiant Essentials Rapid Deployment Pack Windows Edition and Linux Edition Release

Rapid Deployment Pack, Single-Server License 267196-B21
NOTE: This license allows 1 server to be deployed and managed via RDP.

NOTE: For additional ProLiant Essentials Rapid Deployment Pack License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11053_na/11053_na.HTML
http://h18000.www1.hp.com/products/quickspecs/11713_na/11713_na.HTML

ProLiant Essentials Workload Management Pack

ProLiant Essentials Workload Management Pack, Single Server License 303284-B21

NOTE: For additional ProLiant Workload Management Pack License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/11452_na/11452_na.HTML

ProLiant Essentials Virtual Machine Management Pack

ProLiant Essentials Virtual Machine Management Pack, Single-Server License 372214-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Virtual Machine Management Pack License Kits please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12110_na/12110_na.HTML

ProLiant Essentials Vulnerability and Patch Management Pack

ProLiant Essentials Vulnerability and Patch Management Pack, Single-Server License 371645-B21
NOTE: For use with a single server. Contains one license with a unique license activation key and documentation.

NOTE: For additional ProLiant Vulnerability and Patch Management Pack License Kits, please see the QuickSpecs at:
http://h18000.www1.hp.com/products/quickspecs/12111_na/12111_na.HTML

NOTE: Flexible and volume quantity license kits are available for ProLiant Essentials Value Packs. Refer to http://www.hp.com/servers/proliantessentials or the various ProLiant Essentials Value Pack product QuickSpecs for more information.
NOTE: For more information regarding ProLiant Essentials Software, please see the following URL: http://www.hp.com/servers/proliantessentials.

Options

Processor	Intel Xeon MP X3.00 GHz-4MB Processor Option Kit NOTE: This processor option kit (PN 345323-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	345323-B21
	Intel Xeon MP X2.70 GHz-2MB Processor Option Kit NOTE: This processor option kit (PN 345322-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	345322-B21
	Intel Xeon MP X2.20 GHz-2MB Processor Option Kit NOTE: This processor option kit (PN 345321-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	345321-B21
	Intel Xeon MP X2.80 GHz-2MB Processor Option Kit NOTE: This processor option kit (PN 325254-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	325254-B21
	Intel Xeon MP X2.50 GHz-1MB Processor Option Kit NOTE: This processor option kit (PN 325253-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	325253-B21
	Intel Xeon MP X2.0 GHz-1MB Processor Option Kit NOTE: This processor option kit (PN 325252-B21) supports the HP ProLiant ML570 G2 and the HP ProLiant DL580 G2.	325252-B21
Memory (DIMMs)	8 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB)	202173-B21
	4 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB)	202172-B21
	2 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB)	202171-B21
	1 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB)	202170-B21
	Hot Plug Memory Expansion Board NOTE: The Hot Plug Memory Expansion Board provides 8 additional DIMM slots for powering memory-intensive applications.	203320-B21
Optical Drives	Slimline CD-RW/DVD-ROM Combo Drive Option Kit NOTE: Ejectable drive.	331903-B21
	Slimline DVD-ROM Drive (8X/24X) Option Kit (Servers) NOTE: Ejectable drive.	264007-B21
	HP DVD+R/RW 8X Slim	383975-B21

Options

Hard Drives	*Ultra320 SCSI - Universal Hot Plug*	
	300-GB 10,000 rpm U320 Universal Hard Drive (1")	350964-B22
	146.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286716-B22
	72.8-GB 10,000 rpm U320 Universal Hard Drive (1")	286714-B22
	146.8-GB 15,000 rpm U320 Universal Hard Drive (1")	347708-B22
	72.8-GB 15,000 rpm U320 Universal Hard Drive (1")	286778-B22
	36.4-GB 15,000 rpm U320 Universal Hard Drive (1")	286776-B22
	NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates.	
	NOTE: Please see the Hard Drive QuickSpecs for Technical Specifications such as capacity, height, width, interface, transfer rate, seek time, physical configuration, and operating temperature: U320 Hard Drive QS: http://h18000.www1.hp.com/products/quickspecs/11531_na/11531_na.HTML	
Storage Controllers	Smart Array 6402/128 Controller	273915-B21
	Smart Array 6404/256 Controller	273914-B21
	Smart Array 641 Controller	291966-B21
	Smart Array 642 Controller	291967-B21
	256MB Battery-Backed Cache Module NOTE: This 256-MB Battery-Backed Cache Module supports the Smart Array 5300 series controllers, HP Modular Smart Array 1000 and the HP Modular Smart Array 500.	254786-B21
	256MB DDR, Battery-Backed Cache Upgrade Kit for SA-6400 NOTE: This 256-MB Battery-Backed Cache Module upgrade kit supports the Smart Array 6400 series controller only.	273913-B21
	Battery-Backed Write Cache Enabler Option Kit NOTE: This Battery-Backed Write Cache Enable Option Kit (PN 255514-001) is optional for the 1P Model only.	255514-B21
	128MB Battery-Backed Cache Enabler NOTE: This 128MB BBWC supports the Smart Array 641 Controller and Smart Array 642 Controller.	351580-B21
	DL580 G2 Cable Assembly, SCSI, Ultra3, LVDS NOTE: All DL580 G2 models ship standard with the integrated Smart Array 5i Plus Controller, which has been designed to deliver maximum performance and availability across the internal SCSI Duplex backplane. • The Ultra3 SCSI cable is required only if the customer chooses to bypass the Smart Array 5i Plus Controller and connect slot-based SCSI adapters or RAID controllers to the internal SCSI Duplex backplane. • Two cables are required to maintain the standard, duplexed configuration of the backplane. • One cable is required if the simplex configuration is chosen. The backplane is easily configured to simplex mode by means of a simple switch duplex to simplex) located on the top of the backplane itself.	288874-B21
	64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter	268351-B21
	64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS	284688-B21

Options

	Smart Array 6404/256 Controller	273914-B21
	Ultra320 Expansion Module for SA-6402	273911-B21
	NOTE: Please see the following Controller or SCSI Adapter QuickSpecs for Technical Specifications such as PCI Bus, PCI Peak Data Transfer Rate, SCSI Protocols supported, SCSI Peak Data Transfer Rate, Channels, SCSI Ports, Drives supported, Cache, RAID support, and additional information: http://h18000.www1.hp.com/products/quickspecs/11587_na/11587_na.HTML (Smart Array 6400 Series) http://h18000.www1.hp.com/products/quickspecs/12067_na/12067_na.HTML (Smart Array 641) http://h18000.www1.hp.com/products/quickspecs/12069_na/12069_na.HTML (Smart Array 642) http://h18000.www1.hp.com/products/quickspecs/10429_na/10429_na.HTML (SCSI Adapter) http://h18000.www1.hp.com/products/quickspecs/11555_na/11555_na.HTML (U320 Adapter)	
Communications	HP NC310F PCI-X 1000SX Gigabit Server Adapter	368169-B21
	HP NC6170 PCI-X Dual Port 1000SX Gigabit Server Adapter	313879-B21
	HP NC7170 PCI-X Dual Port 1000T Gigabit Server Adapter	313881-B21
	HP NC7771 PCI-X 1000T Gigabit Server Adapter	290563-B21
	HP NC570C PCI-X Dual-port 4x Fabric Adapter	376158-B21
	HP 24-Port 4x Fabric Copper Switch	376227-B21
	HP 1m 4x Fabric Copper Cable	376232-B21
	HP 3m 4x Fabric Copper Cable	376232-B22
	HP 5m 4x Fabric Copper Cable	376232-B23
Redundant Options	800W Hot Plug Redundant Power Supply	278535-001
	800W Hot Plug Redundant Power Supply -inc IEC	278535-B21
Management Options	Remote Insight Lights-Out Edition II	227251-001

Options

Tape Drives

NOTE: For the complete listing of Tape drive offerings for this server, please visit: http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html
For recommended tape drive offerings for this ProLiant server see the following:

Hot Plug Tape Drives

HP StorageWorks DAT 72 Tape Drive, Internal Hot-Plug (Carbon)	Q1529A

USB Tape Drives

HP StorageWorks DAT 72 USB External Tape Drive (Carbonite)	DW027A

External and Rack-Mount Ultrium Tape Drives

HP StorageWorks Ultrium 232 Tape Drive, Internal (Carbonite) NOTE: No internal tape drives fit inside this HP ProLiant server (except hot plug tape). The internal drive shown here is for the 1U and 3U Rack-mount Kit.	DW064A
HP StorageWorks Ultrium 232 Tape Drive, External (Carbonite)	DW065A
HP StorageWorks Ultrium 460 Tape Drive, External (Carbon)	Q1520A
HP StorageWorks Ultrium 448 Tape Drive, External (Carbonite)	DW017A
HP StorageWorks Ultrium 448 Rack-mount (Carbonite) - Single drive installed in a 1U rack-mount kit	DW028A
HP StorageWorks Ultrium 960 Tape Drive , External (Carbonite)	Q1539A
HP StorageWorks 3U Rack-Mount Kit with one Ultrium 960 drive	Q1595A

NOTE: Please see the HP StorageWorks Ultrium Tape Drive QuickSpecs for additional options such as controllers, media, and other related items: http://h18006.www1.hp.com/products/quickspecs/11739_na/11739_na.html
For an up-to-date listing of the latest O/S and software support details for HP Ultrium tape drives, please visit: http://www.hp.com/go/connect.

Rack-Mount Tape Drive Enclosures

HP StorageWorks 1U Rack-Mount Kit NOTE: The 1U Rack-mount Kit can support up to 2 half-height tape drives and is compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT40, DAT72, DLT VS80, DLT VS160, Ultrium 215, Ultrium 232, and Ultrium 448 tape drives.	A7445A
1U USB Cable Option Kit NOTE: Converts a 1U SCSI rack-mount kit to a USB interface to support the USB tape drives.	396114-B21
HP StorageWorks 3U Rack-Mount Kit NOTE: The 3U Rack-Mount Kit can support up to 2 full-height or 4 half-height tape drives and compatible with multiple Single-Ended and LVD SCSI tape drives including DAT 24, DAT 40, DAT 72, DAT 72X6 Autoloader, DLT VS80, DLT VS160, SDLT 320, SDLT 600, Ultrium 215, Ultrium 232, Ultrium 230, Ultrium 448, Ultrium 460, and Ultrium 960 tape drives.	274338-B21

NOTE: Please see the Rack-Mount Tape Drive Kits QuickSpecs for additional information regarding these kits: http://h18000.www1.hp.com/products/quickspecs/10854_na/10854_na.HTML

Options

Tape Autoloaders	**DAT Autoloader**	
	HP StorageWorks DAT 72x6 Tape Autoloader, External (Carbon)	Q1567A
	NOTE: Please see the DAT 72x6 Tape Autoloader QuickSpecs for additional options such as host bus adapters, controllers and media: http://h18006.www1.hp.com/products/quickspecs/11905_na/11905_na.html	
	HP StorageWorks 1/8 Tape Autoloader	
	1/8 Ultrium 232 Tape Autoloader, Tabletop	AF202A
	1/8 Ultrium 460 Tape Autoloader, Tabletop	AA927A
	1/8 Ultrium 960 Tape Autoloader, Tabletop	AF204A
	1/8 Tape Autoloader Rackmount Kit	C9268R
	NOTE: Required to install the unit in a standard 19-inch rack; includes rails and rackmount instructions	
	NOTE: Please reference the 1/8 Tape Autoloader QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs	
	HP StorageWorks SSL1016 Tape Autoloader	
	SSL1016 Ultrium 460 Tape Autoloader	330821-B21
	SSL1016 SDLT 320 Tape Autoloader	330816-B21
	NOTE: Please reference the SSL1016 Tape Autoloader QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs	
Tape Libraries	**HP StorageWorks MSL6000 Tape Library**	
	Ultrium 960 technology	
	MSL6030, 1 drive, 30 slots, Ultrium 960	AD606A
	MSL6030, 1 drive, 30 slots, Ultrium 960, with embedded FC router	AD608A
	MSL6030, 2 drive, 60 slots, Ultrium 960	AD607A
	MSL6030, 2 drive, 60 slots, Ultrium 960, with embedded FC router	AD609A
	Ultrium 460 technology	
	MSL6030, 1 drive, 30 slots, Ultrium 460	AD598A
	MSL6030, 1 drive, 30 slots, Ultrium 460, with embedded FC router	AD600A
	MSL6030, 2 drive, 60 slot Ultrium 460	AD599A
	MSL6030, 2 drive, 60 slot Ultrium 460, with embedded FC router	AD601A
	NOTE: Please reference the MSL6000 Tape Library QuickSpecs at http://www.hp.com/go/automation for additional information needed to create a complete solution; reference current compatibility information at http://www.hp.com/go/ebs.	

Options

Magneto-Optical Jukeboxes	**HP StorageWorks 9.1 GB Optical Jukeboxes**	
	600mx, 4 drive, 64 slot jukebox	C1160M
	1200mx, 4 drive, up to 128 slots	C1104M
	2200mx, 6 drive, up to 238 slots	C1107M
	NOTE: Please see the HP StorageWorks Magneto-Optical Products data sheet for a complete listing of available jukeboxes at: http://www.hp.com/products1/storage/products/archivalprod/brochures/MO_family_pb.pdf	
	NOTE: Please reference the Magneto-Optical Jukebox data sheets at http://www.hp.com/go/optical for additional information needed to create a complete solution.	
Ultra Density Optical Jukeboxes	1900ux, 4 drive, 64 slot jukebox	AA966A
	3800ux, 4 drive, 128 slot jukebox	AA969A
	7100ux, 6 drive, 238 slot jukebox	AA971A
	NOTE: Please see the HP StorageWorks Ultra Density Optical Jukeboxes QuickSpecs for a complete listing of available jukeboxes at: http://h18006.www1.hp.com/products/quickspecs/11944_div/11944_div.html	
	NOTE: Please reference the Ultra Density Optical Jukebox QuickSpecs at http://www.hp.com/go/optical for additional information needed to create a complete solution	
Cluster Options	ProLiant Cluster Starter Kit	364023-B21
	NOTE: For additional information regarding the ProLiant Cluster Starter Kit please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11935_na/11935_na.html	
	ProLiant Cluster Kit with OpenView Storage Mirroring	364025-B21
	NOTE: For additional information regarding the ProLiant Cluster Kit with OpenView Storage Mirroring please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11934_na/11934_na.html	
	HP HA/F200 for Entry SAN Cluster	364026-B22
	NOTE: For additional information regarding the ProLiant Cluster for Entry Level SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11932_na/11932_na.html	
	ProLiant Cluster HA/F500 for the Enterprise SAN	364024-B21
	NOTE: For additional information regarding the ProLiant Cluster HA/F500 for Enterprise SAN please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11933_na/11933_na.html	
	HP Serviceguard for Linux ProLiant Cluster A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (2 node license cluster kit)	305199-B24
	HP Serviceguard for Linux ProLiant Cluster A.11.16 for SUSE SLES 9 and Red Hat EL & 4 (2 node license cluster kit)	305199-B26
	HP Serviceguard for Linux License A.11.15 for SUSE SLES 8 / UnitedLinux 1.0 and Red Hat EL 3 (single license version)	307754-B24
	HP Serviceguard for Linux A.11.16 for SUSE SLES9 and Red Hat EL 3 & 4 (single license version)	307754-B26

	NOTE: For additional information regarding the HP Serviceguard for Linux License, please see the following QuickSpecs at: http://h18000.www1.hp.com/products/quickspecs/11518_na/11518_na.html	
HP StorageWorks Modular Smart Array 20	HP StorageWorks Modular Smart Array 20 NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies.	335921-B21
	HP StorageWorks Modular Smart Array 20 Starter Kit NOTE: Rack-mountable 12 (SATA) drive enclosure with U320 Host connectivity, redundant power supplies. Includes Smart Array 6402/128 Controller. NOTE: The Modular Smart Array Enclosure 20 Family supports the SATA 1.5Gb/s 1" Hot Plug Hard Drives.	366172-B21
HP StorageWorks Modular Smart Array 30	HP StorageWorks Modular Smart Array 30 SB NOTE: Rack-mountable 14 drive enclosure with single bus, redundant power supplies	302969-B21
	HP StorageWorks Modular Smart Array 30 DB NOTE: Rack-mountable 14 drive enclosure with dual bus, redundant power supplies NOTE: The Modular Smart Array Enclosure 30 Family supports the Wide Ultra3, Ultra320 1" Hot Plug Hard Drives.	302970-B21
HP StorageWorks Modular Smart Array 500 G2	HP StorageWorks Modular Smart Array 500 Generation 2 NOTE: Please see the Modular Smart Array 500 Generation 2 QuickSpecs for additional information including configuration steps and additional options needed for a complete solution at: http://h18000.www1.hp.com/products/quickspecs/11956_na/11956_na.HTML	335880-B21
HP StorageWorks Modular Smart Array 1000	HP StorageWorks Modular Smart Array 1000 NOTE: Please see the Modular Smart Array 1000 QuickSpecs for additional options and configuration information at http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML	201723-B22
HP StorageWorks Modular Smart Array 1500 cs	Modular Smart Array 1500 Controller Shelf NOTE: Please see the StorageWorks Modular SAN Array 1500 cs QuickSpecs for additional options and configuration information at: http://www.hp.com/go/MSA1500cs	AA986A
StorageWorks Options	StorageWorks SAN Switch 2/8-EL Upgrade Kit	325888-B21
	StorageWorks SAN Switch 2/16-EL Upgrade Kit	325889-B21
	StorageWorks Director 2/64 NOTE: Please see the StorageWorks Director 2/64 QuickSpecs for additional information: http://h18000.www1.hp.com/products/quickspecs/11003_na/11003_na.HTML	286809-B21

Options

Uninterruptible Power Systems – Rack	HP UPS R1500 XR (1440VA, 1340 Watt), Low Voltage	204404-001
	HP UPS R3000 XR (2880VA, 2700 Watt), Low Voltage	192186-001
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage	192186-002
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A IEC309 Plug)	192186-B32
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A CEE 7/7 SCHUKO Plug)	192186-B33
	HP UPS R3000 XR (3000VA, 2700 Watt), High Voltage (16A BS-546 Plug)	192186-AR1
	HP UPS R5500 XR, (5000VA, 4500 Watt), High Voltage	326529-D71
	HP UPS R12000 XR N+x (200-240V) (WW-hardwired) NOTE: The UPS R12000 XR has a hardwired input and output; requires a 100A circuit.	207552-B22
HP Power Distribution Unit with Power Monitoring	HP Power Distribution Unit with Power Monitoring Model S2324 - dual input, 3 phase, 24A	370959-D71
	HP Power Distribution Unit with Power Monitoring Model S1324 - single input, 3 phase, 24A	370960-D71
	HP Power Distribution Unit with Power Monitoring Model S2140 - dual input, 1 phase, 40A	370961-D71
	HP Power Distribution Unit with Power Monitoring Model S1140 - single input, 1 phase, 40A	370962-D71
Modular Power Distribution Units 1U/0U (Up to 32 outlets) NOTE: 1U/0U mounting brackets shipped with the unit (optimized for 10000 and 9000 series racks).	Modular Power Distribution Units (mPDU), Low Volt Model, 24A (100-127 VAC) NOTE: This model has a detachable input power cord and is adaptable to country specific requirements. The 16A PDU also connects to the high volt models of the UPS R3000 XR and R6000 models. Cable P/N 340653-001 required if connecting to UPS R3000 XR (192186-002 NA -High Volt model only).	252663-D71
	Modular Power Distribution Units (mPDU), High Volt Model, 24A (200-240 VAC) NOTE: L6-30 input.	252663-D72
	NOTE: Please see the following Modular Power Distribution Unit (Zero-U/1U Modular PDUs) QuickSpecs for additional options including cables: http://h18000.www1.hp.com/products/quickspecs/11041_na/11041_na.HTML	
HP Monitored Power Distribution Unit	HP PDU with Power Monitoring, Model S1348 - single input, 3-phase, 60A	AF916A
USB Options	USB 2-Button Optical Scroll Mouse (Carbonite/Silver)	DC172B
	USB 1.44-MB External Diskette Drive (Carbonite)	DC141B

Options

Third Party Rack Kit	3rd Party Rack Kit NOTE: The rack kit (PN 287528-B21) provides support for any rack, square hole or round hole, (including HP Rack System /E and HP Systems), with an adjustment range from 23 ½" - 34" deep. NOTE: The Third party rack kit is required for round hole racks or for square hole racks that do not conform to the adjustment range of the standard rail that ships with the server.	287528-B21
Telco Rack Support	Rack Adapter Kit NOTE: This kit allows HP rack servers to fit in racks that are 24" wide. NOTE: Support for all 2-post Telco racks requires the Third Party option kit 287528-B21, plus an additional option kit from Rack Solutions. The Rack Solutions brackets can be purchased at: http://www.racksolutions.com/hp.	332815-B21
HP Rack 5000 Series (Graphite Metallic)	HP 5642 Rack-Unassembled	358254-B21
Rack Options for Rack 5000 Series	Stabilizer Kit for 5642 rack (Graphite Carbon) NOTE: The stabilizing kit is used to prevent rack from tipping over. Baying Kit for 5642 rack (Graphite Carbon) NOTE: The baying kit is used to join two or more HP 5642 racks.	374493-B21 374499-B21
HP Rack 10000 Series (Graphite Metallic)	10642 (42U) Infrastructure Rack (Low Voltage) 10642 (42U) Infrastructure Rack (High Voltage) HP Rack S10614 (14U) Rack Cabinet – Shock Pallet HP Rack 10842 (42U, 800mm wide) – Pallet HP Rack 10842 (42U, 800mm wide) – Shock Pallet HP Rack 10647 (47U) – Pallet HP Rack 10647 (47U) – Crated HP Rack 10642 (42U) – Pallet HP Rack 10642 (42U) – Shock Pallet HP Rack 10642 (42U) – Crated HP Rack 10636 (36U) – Pallet HP Rack 10636 (36U) – Shock Pallet HP Rack 10636 (36U) – Crated HP Rack 10622 (22U) – Pallet HP Rack 10622 (22U) – Shock Pallet HP Rack 10622 (22U) – Crated NOTE: -B21 (pallet) used to ship empty racks shipped on a truck -B22 (shock pallet) used to ship racks with equipment installed (by custom systems, VARs and Channels) -B23 (crated) used for air shipments of empty racks NOTE: Please see the Rack 10000 QuickSpecs for Technical Specifications such as height, width, depth, weight, and color: http://h18000.www1.hp.com/products/quickspecs/10995_na/10995_na.HTML	379006-001 379005-001 292302-B22 257415-B21 257415-B22 245160-B21 245160-B23 245161-B21 245161-B22 245161-B23 245162-B21 245162-B22 245162-B23 245163-B21 245163-B22 245163-B23

NOTE: For additional information regarding Rack Cabinets, please see the following URL: http://h18000.www1.hp.com/products/servers/proliantstorage/rack-options/index.html.

Rack Options for HP Rack 10000 Series	HP Rack Light Kit (Neon)	361589-B21
	HP Rack Plinth Kit (Carbon)	251960-B21
	42U Side Panel – Graphite Metallic	246099-B21
	36U Side Panel – Graphite Metallic	246102-B21
	47U Side Panel – Graphite Metallic	255486-B21
	TFT7210R Rack Mounted 17" Monitor NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/.	348373-B21
	TFT5600 Rack Keyboard Monitor NOTE: For a complete list of Monitors please view the following URL: http://h18004.www1.hp.com/products/monitors/.	221546-001
	1U Rack Keyboard & Drawer (Carbon)	257054-001
HP KVM Switch Options	IP Console Switch Box (KVM/IP), 3 x 1 x 16	262586-B21
	IP Console Switch Box (KVM/IP), 1 x 1 x 16	262585-B21
	Server Console Switch (KVM), 0 x 1 x 8 port	336044-B21
	Server Console Switch (KVM), 0 x 2 x 16 port	336045-B21
	PS/2 Interface Adapter, 1 pack	262588-B21
	PS/2 Interface Adapter, 8 pack	262587-B21
	USB Interface Adapter, 1 pack	336047-B21
	Serial Interface adapter - 1 Pack with power supply	373035-B21
	NOTE: Cat5e cables are required to connect Interface Adapters to Console Switches. Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.	
	HP 1x 4 USB/PS2 KVM Switch, TT	371301-D71
	HP 1x 4 USB/PS2 KVM Switch, RM	371302-B21
	HP PS2 KVM Cable with audio, 6', 2-pack	371730-B21
	HP USB KVM Cable with audio, 6', 2-pack	371729-B21
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm.	

Options

HP Serial Console Server Options	HP 16 Port Serial Console Server	AF101A
	HP 48 Port Serial Console Server	AF102A
	Serial Adapter, RJ45-DB9 DCE Female, 1 Pack	AF103A
	Serial Adapter, RJ45-DB9 DCE Female, 8 Pack	AF110A
	NOTE: Cat5e cables are required to connect Serial Adapters to Serial Console Servers. Additional Serial Adapters and Cat5e cables can be found at the following URL: http://www.hp.com/go/kvm.	
	NOTE: For additional information regarding KVM switches, Serial Console servers, rack mount monitors, keyboards and all related options please see the following URL: http://www.hp.com/go/kvm.	
Service and Support Offerings (HP Care Pack Services)	*Hardware Services On-site Service*	
	4-Hour On-site Service, 5-Day x 13-Hour Coverage, 3 Years, Electronic	U4607E
	4-Hour On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4608E
	6-Hour Call to Repair, On-site Service 7-Day x 24-Hour Coverage, 3 Years (U.S. Part Number)	
	6-Hour Call to Repair, On-site Service, 7-Day x 24-Hour Coverage, 3 Years, Electronic	U4609E
	Installation & Start-up Services	
	Hardware Installation, Electronic	U4617E
	Installation & Start-Up of a ProLiant server and Microsoft or Linux O/S per the Customer Description and/or Data Sheet. To be delivered on a scheduled basis 8am-5pm, M-F, excl. HP holidays, Electronic	U4618E
	Support Plus	
	Onsite HW support, 8am-9pm, M-F, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	U4619E
	Onsite HW support, 8am-9pm, M-F, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 8am-9pm, M-F 2hr response time excl. HP holidays, Electronic	U4621E
	Support Plus 24	
	Onsite HW support 24x7, 4hr response and Microsoft O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U4620E
	Onsite HW support 24x7, 4hr response and Linux O/S SW Tech support offsite, onsite at HP's discretion, 24x7 2hr response time incl. HP holidays, Electronic	U4622E
	NOTE: For more information, customer/resellers can contact: http://www.hp.com/services/carepack	

HP ProLiant DL580 G2 2P Models

Standard Memory

2048 MB 200MHz Double Data Rate (DDR) SDRAM (PC1600 Registered SDRAM Memory with Advanced ECC functionality)

Standard Memory Plus Optional Memory and Optional Memory board

Up to 26,624 MB memory is available with the optional installation of PC1600 Registered ECC SDRAM Memory kits and a second, optional memory board.

Standard Memory Replaced with Optional Memory and Optional memory board

Up to 32,768 MB of memory is available with the removal of the standard 2048 MB of memory, the optional installation of PC1600 Registered ECC SDRAM Memory kits, and a second, optional memory board.

NOTE: Memory must be added in banks of four DIMMS. This chart does not represent all possible memory configurations.

Standard Memory Summary		Standard Memory Board (Slots)							
		1	2	3	4	5	6	7	8
Standard	2048 MB	512 MB	512 MB	512 MB	512 MB	Empty	Empty	Empty	Empty
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty

Optional Memory Summary		Standard Memory Board (Slots)							
Optional (Standard Memory Plus Optional Memory Board and Optional Memory)	26,624 MB	1	2	3	4	5	6	7	8
		512 MB	512 MB	512 MB	512 MB	2048 MB	2048 MB	2048 MB	2048 MB
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		2048 MB	2048 MB	2048 MB	2048 MB	2048MB	2048 MB	2048 MB	2048 MB

Maximum Memory Summary		Standard Memory Board (Slots)							
Maximum (Standard Memory Replaced with Optional Memory with Optional Memory board)	32,768 MB	1	2	3	4	5	6	7	8
		2048 MB	2048 MB	2048MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB

The following memory options are available from HP:

- 1 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB) 202170-B21
- 2 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB) 202171-B21
- 4 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB) 202172-B21
- 8 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB) 202173-B21

Expand your memory capacity with the Hot Plug Memory Expansion Board. Provides 8 additional DIMM slots for powering memory-intensive applications.

- Hot Plug Memory Expansion Board 203320-B21

Memory

HP ProLiant DL580 G2 1P Models

Standard Memory

1024 MB 200MHz Double Data Rate (DDR) SDRAM (PC1600 Registered SDRAM Memory with Advanced ECC functionality

Standard Memory Plus Optional Memory and Optional memory board

Up to 25,600 MB memory is available with the optional installation of PC1600 Registered ECC SDRAM Memory kits and a second, optional memory board.

Standard Memory Replaced with Optional Memory and optional memory board

Up to 32,768 MB of memory is available with the removal of the standard 1024 MB of memory, the optional installation PC1600 Registered ECC SDRAM Memory kits, and a second, optional memory board.

NOTE: Memory must be added in banks of four DIMMS. This chart does not represent all possible memory configurations.

Standard Memory Summary		Standard Memory Board (Slots)							
		1	2	3	4	5	6	7	8
Standard	1024 MB	256 MB	256 MB	256 MB	256 MB	Empty	Empty	Empty	Empty
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		Empty	Empty	Empty	Empty	Empty	Empty	Empty	Empty

Optional Memory Summary		Standard Memory Board (Slots)							
Optional (Standard Memory Plus Optional Memory Board and Optional Memory)	25,600 MB	1	2	3	4	5	6	7	8
		256 MB	256 MB	256 MB	256 MB	2048MB	2048MB	2048MB	2048MB
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		2048MB	2048MB	2048MB	2048MB	2048MB	2048MB	2048MB	2048MB

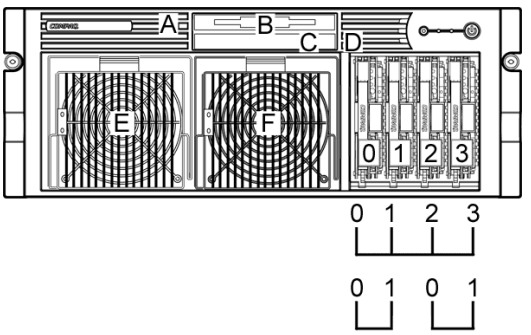
Maximum Memory Summary		Standard Memory Board (Slots)							
Maximum (Standard Memory Replaced with Optional Memory with Optional Memory board)	32,768 MB	1	2	3	4	5	6	7	8
		2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB
		Optional 2nd Memory Board (Slots)							
		1	2	3	4	5	6	7	8
		2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB	2048 MB

The following memory options are available from HP:

- 1 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 256 MB) 202170-B21
- 2 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 512 MB) 202171-B21
- 4 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 1024 MB) 202172-B21
- 8 GB PC1600 Registered ECC SDRAM Memory Kit (4 x 2048 MB) 202173-B21

Expand your memory capacity with the Hot Plug Memory Expansion Board. Provides 8 additional DIMM slots for powering memory-intensive applications.

- Hot Plug Memory Expansion Board 203320-B21



A	Diskette Drive eject button
B	Ejectable: 24x IDE CD-ROM (Slimline)
C	Ejectable: 1.44-MB Diskette Drive (Slimline)
D	CD-ROM Drive eject button
E	800-Watt (low line or high line) Redundant Hot Plug Power Supply
F	800-Watt (low line or high line) Primary Hot Plug Power Supply
0-3	Wide Ultra3 Drive Cage (Duplex or Simplex configurable). Duplex is standard shipping configuration

Drive Support

	Quantity Supported	Position Supported	Controller
Ejectable Slimline Drives			
1.44-MB slimline Diskette Drive	Up to 1	C	Integrated
IDE slimline CD-ROM Drive	Up to 1	B	Integrated IDE
Slimline DVD-ROM Drive (8X/24X) Option Kit	Up to 1	B or C	Integrated IDE

Hard Drives

Ultra320 Hot Pluggable Drives

	Quantity Supported	Position Supported	Controller
1-inch	Up to 4	0-3	Smart Array 5i Plus Controller (integrated on system board)
300-GB 10,000 rpm			Smart Array 6402/128 Controller
146.8-GB 10,000 rpm			Smart Array 641 Controller
72.8-GB 10,000 rpm			Smart Array 642 Controller
146.8-GB 15,000 rpm			64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter
72.8-GB 15,000 rpm			
36.4-GB 15,000 rpm			

NOTE: All U320 Universal Hard Drives are backward compatible to U2 or U3 speeds. U320 drives require an optional U320 Smart Array Controller or U320 SCSI HBA to support U320 transfer rates.

Storage

External Storage

	Quantity Supported	Position Supported	Host Controller or Adapter
Modular Smart Array 30 Family	Up to 20	External	Smart Array 6402/128 Controller Smart Array 6404/256 Controller Smart Array 642 Controller 64-Bit/133-MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
Modular Smart Array 500 System	1	External	Smart Array 532 Controller (used as Host Bus Adapter) Please see the Modular Smart Array 500 QuickSpecs for the latest list of supported HBAs: http://www.hp.com/go/msa500
Modular Smart Array 1000	Please see the Modular Smart Array 1000 QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1000 QuickSpecs (URL below) for the latest list of supported HBAs
Modular Smart Array 1500 cs	Please see the Modular Smart Array 1500 cs QuickSpecs below to determine configuration requirements	External	Please see the Modular Smart Array 1500 cs QuickSpecs (URL below) for the latest list of supported HBAs

Modular Smart Array 1000: http://h18000.www1.hp.com/products/quickspecs/11033_na/11033_na.HTML
Modular Smart Array 1500 cs: http://www.hp.com/go/MSA1500cs

Maximum Storage Capacity – (External Enclosure Attached)

Internal	1.20 TB (4 x 300-GB Ultra320 SCSI 1" Drives)
External	84.00 TB (20 x (14 x 300-GB Ultra320 SCSI 1" Drives))
Total	85.20 TB

Tape Drives, Tape Autoloaders, & Tape Libraries

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Drives listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10233.html

NOTE: For an up-to-date listing of the latest O/S Support details for each of the Tape Autoloaders and Tape Libraries listed below, please see the following:
http://h18000.www1.hp.com/products/quickspecs/North_America/10809.html

NOTE: For complete listing of tape drive offerings see
http://www.hp.com/products1/storage/compatibility/tapebackup/ISS/index.html

For details on connecting tape drives to this server, see the following:

Storage

	Quantity Supported	Position Supported	Controller
HP StorageWorks Tape Drives, Hot Plug DAT 40 Hot Plug DAT 72 Hot Plug	1	0-3	Smart Array 5i Plus Controller (integrated on system board) 64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Drives, USB External DAT 24 USB DAT 40 USB DAT 72 USB	Up to 2	External	USB Port
HP StorageWorks Tape Drives, External Ultrium 960 SDLT 600	1 per SCSI Channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Autoloaders, External DAT 72x6 Tape Autoloader 1/8 Tape Autoloader SSL1016 Tape Autoloader	1 per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Rack-mount Tape Drive Enclosures 1U Rack-Mount Kit 3U Rack-Mount Kit 5U Rack-Mount Kit	1 per SCSI channel	External	64-Bit/133MHz Dual Channel Ultra320 SCSI Adapter 64-Bit/133-MHz Single Channel Ultra320 SCSI HBA G2 64-Bit/66-MHz Dual Channel Wide Ultra3 SCSI Adapter, Alternate OS
HP StorageWorks Tape Libraries, External MSL6000 (Ultrium 960-based) MSL6000 (SDLT 600-based) MSL6000 (Ultrium 460-based) MSL5026S2 (SDLT 320-based) MSL5052S2 (SDLT 320-based)	Please reference the MSL Tape Library QuickSpecs to determine configuration requirements	External	Please consult the EBS connectivity matrix at http://www.hp.com/go/ebs for detailed connectivity information.

Power Specifications

Part Number	278535-001
Spare Kit	192201-B21
Operational Input Voltage Range (V rms)	90 to 264
Frequency Range (Nominal) (Hz)	47 to 63 (50/60)

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Max Rated Output Wattage Rating	800	800	800	800	800	800
Nominal Input Current (A rms)	11.7	9.9	5.2	4.9	4.7	4.5
Max Rated Input Wattage Rating (Watts)	1143	1111	1067	1067	1067	1053
Max. Rated VA (Volt-Amp)	1166	1134	1088	1088	1088	1074
Efficiency (%)	70	72	75	75	75	76
Power Factor	0.98	0.98	0.98	0.98	0.98	0.98
Leakage Current (mA)	.43	.50	.90	.96	1.00	1.04
Maximum Inrush Current (A peak)	25	25	25	25	25	25
Maximum Inrush Current duration	20	20	20	20	20	20

System Specifications

HP ProLiant DL580 G2 Fully Configured

Up to 4 Processors, 16 Memory Slots, 4 Hard Drives, 6 PCI Slots, and 2 Hot Plug Power Supplies

Nominal Input Voltage (Vrms)	100	115	208	220	230	240
Fully Loaded System Input Wattage (W)	954	928	890	890	890	879
Fully Loaded System Input Current (A rms)	10	8.5	4.4	4.1	4.0	3.7
Fully Loaded System Thermal (BTU- Hr)	3253	3163	3063	3063	3063	2996
Fully Loaded System VA (Volt-Amp)	1004	976	909	909	909	897
System Leakage with all power supplies loaded (mA)	.87	1.00	1.81	1.91	2.00	2.09
System Inrush Current with all power supplies loaded (A)	50	50	50	50	50	50
Power cord requirements	Nema 5-15P to IEC320-C19			Option no./Spare no: 235603-001/237457-001		
	PDU Jumper Cord IEC320-C19 to IEC320-C20			Option no./Spare no: 295633-B21/295508-001		
	PDU Jumper Cord IEC320-C14 to IEC320-C19			Option no./Spare no: 291034-001/292241-001		

NOTES:

ActiveAnswers Power Calculation

Power calculator is LIVE on ActiveAnswers website. This is an external link.

Follow this link: http://h30099.www3.hp.com/configurator/powercalcs.asp.

To drill down to calculators:

- Click on: "ProLiant Servers"
- Click on the Server of interest. Example: DL580 G2
- Click on: "Power Calculator" link (You may need to scroll down to see it.)

Power Specifications

Power Cord Part Number	295529-001

System Unit Rack	Chassis Footprint (HxWxD)	6.94 x 19 x 26.5 in (17.6 x 48.3 x 67.3 cm)	
	Weight No hard drives installed, one power supply	66 lb (29.9 kg)	
	Input Requirements	Rated Input Voltage	100 to 120 VAC/200 to 240 VAC
		Rated Input Frequency	50 to 60 Hz
		Input Power	1135W @ 110 VAC/1125W @ 220 VAC
		Rated Input Current	12A (100 VAC), 9.8A (120 VAC), 4.9A (220 VAC)
	Max BTU Rating	4000 BTU	
	Power Supply Output Power (per power supply)	Rated Steady-State Power	800W/800W (lowline/highline)
		Maximum Peak Power	800W/800W (lowline/highline)
	Temperature Range	Operating	50° to 95° F (10° to 35° C)
		Non-operating	-20° to 140° F (-29° to 60° C)
		Shipping	-22° to 122° F (-30° to 50° C)
	Relative Humidity (non-condensing)	Operating	10% to 70%
		Non-operating	5% to 95%
	Maximum Wet Bulb Temperature	101.7° F (38.7° C)	
	Acoustic Noise	NOTE: Listed are the declared A-weighted sound power levels LWAd and the declared average bystander position sound pressure levels LpAm when operating in a 23° C ambient environment. Noise emissions were measured in accordance with ECMA 74 and declared in accordance with ECMA 109.	
		Idle (Fixed Disk Drives Spinning)	
		L WAd (BELS)	7.0
		L pAm (dBA)	54
		NOTE: These values apply to 2U rack configuration. Configuration tested included 2 processors, two 10, 000 rpm hard drive, 1 power supplies, 1 power supply fan and 4 CPU fans.	

24X Max (or higher) IDE CD-ROM Drive Slim Line	Disk	Applicable Disk	CD-DA, CD-ROM (Mode 1 and 2) CD-XA, CD-I (Mode 2, Form 1 and 2) Photo CD (Single and Multi-session) Mixed Mode (Audio and Data combined)
		Capacity	540 MB (Mode 1, 12 cm) 650 MB (Mode 2, 12 cm)
		Diameter	4.7 x 3.15 in (12 x 8 cm)
		Rotational Speed	4200 rpm maximum
		Center Hole	0.6 in/15 mm diameter
		Thickness	1.2 mm
		Track Pitch	1.6 μm
	Block Size	Mode 1	2,048
		Mode 2	2,340, 2,336, 1,024 bytes
		CD-DA	2,352 bytes
		CD-XA	2,328 bytes
	Interface	IDE (ATAPI)	
	Access Times (typical)	Random	100 ms
		Full-Stroke	2000 ms
	Audio Output Level	Line-Out	0.7 VRMS at 47 kOhms
		Headphone	0.6 VRMS at 32 kOhms (maximum volume)
	Data Transfer Rate	Sustained	150 KB/s (sustained 1X)
		Burst	2100 to 3600 KB/s
	Cache Buffer	128 KB	
	Start-up Time (typical)	< 7seconds	
	Stop Time	< 4seconds	
	Laser Parameters	Type	Semiconductor Laser GaA1As
		Wave Length	780 ± 25 nm
		Divergence Angle	53.5° ± 1.5°
		Output Power	0.14 mW
	Operating Conditions	Temperature	41° to 113° F (5° to 45° C)
		Humidity	10% to 80%
	Dimensions	(HxWxD, maximum)	1.69 x 5.75 x 8.19 in (4.29 x 15 x 20.8 cm)
		Weight	2.66 lb (1.2 kg)
Slimline CD-RW/DVD-ROM 24X Combo Drive (Multibay)	Shipping Dimensions	13.88 x 11.38 x 9.25 in (35.26 x 28.91 x 23.50 cm)	
	Shipping Weight	5 lb (2.27 kg)	
	Disk	Applicable Disk	DVD-ROM DVD-R (Read Only) 2.6 GB/side DVD-RAM (Read Only) 5.2 GB/side DVD-RAM (Read Only) CD-ROM Mode-1 data disc CD-ROM Mode-2 data disc CD Audio disc

		CD-Extra		
		CD-RW		
		CD-R		
		CD Text		
		PhotoCD		
		CD-I (mode 2)		
		CD-I Ready		
		CD-Bridge		
	Capacity	DVD-ROM	DVD-SL	4.7 GB/side
			DVD-DL	8.5 GB/side
			Double Sided	9.40 GB/side
		DVD-R		3.95 GB/side
		DVD-RAM		2.6 GB/side and 5.2 GB/
		CD-ROM	Mode-1	650 MB (550 MB)
			Mode-2	742 MB (640 MB)
	Block Size	DVD		2,048 bytes
		CD		2,352 (Mode-0)
				2352, 2340, 2336, 2048 bytes (Mode-1)
				2352, 2340, 2336, 2048 bytes (Mode-2)
	Diameter	120 mm, 80 mm (with adapter at vertical mounting mode)		
Loading Mechanism	Tray type			
Interface	EIDE (ATAPI)			
Access Times (typical)	Random	DVD-ROM < 120 ms, CD-ROM < 110 ms		
	Full-Stroke	DVD-ROM < 240 ms, CD-ROM < 160 ms		
Audio Output Level (typical)	Line-out	CD 0.7 Vrms at 47 Kohms Load		
Data Transfer Rate (sustained)	DVD-ROM	Single Layer		10.8 MB/sec. Max.
	DVD-RAM	2.77 MB/sec. Max		
	CD-ROM	7.2 MB/sec. Max.		
Cache Buffer	2 MB			
Spin-up Time (typical)	less than 10 seconds			
MTBF	120,000 Power On Hours (POH)			
Ambient Temperature	Operating	-22° to 140° F (-30° to 60° C)		
Relative Humidity	Operating	10% to 80%		
	Storage/Transportation	5% to 95%		
Dimensions	(HxWxD, maximum)	0.5 x 5.04 x 5.1 in (12.7x128x129.4 mm)		
Option Kit Contents	DVD-ROM drive with installation guide, warranty card, registration card			

Integrated Lights-Out Standard (integrated on system board)	Architecture	32-bit PCI-based health and remote management ASIC (Application Specific Integrated Circuit)
	Processor	32-bit RISC processor core running at 66 MHz
	Upgradability	Option firmware upgradable via flash ROM.
	Video Support	Utilizes the host server's embedded video chip. Supports VGA/SVGA, 640 x 480 (256 to 16.7M colors), 800 x 600 (256 to 16.7M colors), 1024 x 768 (256 to 65K colors), 1280 x 1024 (256 colors)
	Interfaces	One Ethernet network connection (10/100 Mb/s)
	Memory	2-MB Flash ROM
		8-MB SDRAM
	Operating System Support	Microsoft Windows NT 4.0 Server
		Windows NT 4.0 Enterprise Edition
		Windows 2000 Server
		Windows 2000 Advanced Server
		Red Hat 7.x
		SuSE 7.0
		Novell NetWare 5.x, 6.x
	Client Browser Support	Microsoft Internet Explorer 5.5 or later.
	iLO Standard Features	Virtual Text Remote Console
		Virtual Power Button Control
		Dedicated LAN Connectivity
		Automatic IP Configuration via DHCP/DNS/WINS
		Industry Standard 128-bit Secure Sockets Layer (SSL) Security
		IML and iLO Event Logging
		Support for up to 12 user accounts with customizable access privileges
	iLO Advanced Features (optional)	Virtual Graphical Remote Console
		Virtual Floppy Drive

Integrated Smart Array 5i Plus Controller	Data Compatible with all Smart Array Controllers	Yes
	Instant Upgrades to other Smart Array Controllers	Yes
	Consistent Software Manageability Tools	Yes
	PCI-X Bus	64-bit, 100 MHz (integrated on system board)
	PCI-X Peak Data Transfer Rate	800 MB/s
	SCSI Protocols Supported	Ultra3, Ultra2
	SCSI Peak Data Transfer Rate	160 MB/s per channel NOTE: For ProLiant servers having TWO internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.
	Channels	2 (only one connected) NOTE: For ProLiant servers having two internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.
	SCSI Ports (external/internal)	0/1 NOTE: For ProLiant servers having two internal drive bays on separate SCSI ports: SCSI Peak Data Transfer Rate is 320 MB/s total; 160 MB/s per channel and Channels is 2.
	Drives Supported (maximum)	2 NOTE: Maximum is the total number of internal drives on each specific ProLiant server.
	Cache	64 MB Read and/or Write Cache
	Battery-Backed Write Cache	Yes, with installation of Battery-Backed Write Cache Enabler, up to 64MB
	RAID Support	0, 1, 1+0, 5
	Logical Drives (maximum)	Maximum = total number of drives
	Online Configuration	Yes
	Online Capacity Expansion	Yes
	Logical Drive Capacity Extension	Yes
	Online Stripe Size Migration	Yes
	Online RAID Level Migration	Yes
	Online Spare Support	Yes
	Automatic Data Recovery	Yes
	Drive Roaming	Yes
	Redundant Controllers	No

Technical Specifications

HP NC7170 Dual Port PCI-X 1000T Gigabit Server Adapter	Network Interface	Two 10/100/1000-T ports	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
		IEEE 802.3ad, IEEE 802.3p, and IEEE 802.3Q	
	Data Transfer Method	64-bit/133MHz PCI-X, compatible with 64/100, 64/66, 64/33 and 32/33	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-T (Half and Full-Duplex)	2000 Mb/s
	Connector	Two RJ-45	
	Cable Support	10Base-T	10Base-T
		10/100/1000Base-T	10/100/1000Base-T
NC7770 PCI-X Gigabit Server Adapter	Network Interface	10/100/1000-T	
	Compatibility	IEEE 802.3 10Base-T	
		IEEE 802.3ab 1000Base-T	
		IEEE 802.3u 100Base-TX	
	Data Transfer Method	64-bit/133MHz PCI-X	
	Network Transfer Rate	10Base-T (Half-Duplex)	10 Mb/s
		10Base-T (Full-Duplex)	20 Mb/s
		100Base-TX (Half-Duplex)	100 Mb/s
		100Base-TX (Full-Duplex)	200 Mb/s
		1000Base-T (Half and Full-Duplex)	2000 Mb/s
	Connector	RJ-45	
	Cable Support	10Base-T	Category 3,4 or 5 UTP up to 328 ft (100 m)
		10/100/1000Base-T	Category 5 UTP (2 pair); up to 328 ft (100 m)

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